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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/659,291

09/11/2003

Robert Markes

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EXAMINER

ALEXANDER, LYLE

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

10/23/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/659,291	<b>Applicant(s)</b> MARKES, ROBERT	
	<b>Examiner</b> LYLE A. ALEXANDER	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,5-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5-10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Election/Restrictions***

1. Applicant's traversal of election by original presentation in the 3/12/09 Office action is acknowledged. The traversal is on the ground(s) that the examiner has confused the function of the claimed photodiode. The Office agrees with Applicant's that photodiodes convert light energy into electrical signals and are not readily recognized as a light source. The Office agrees the statement made in the 3/12/09 restriction requirement that a photodiode is a light source is incorrect and regrets making this statement. However, the basis of the restriction requirement is tenable because it states " ... the method can be performed with a different light source ... such as a fluorescent light source." Apparatus claim 1 does not claim a light source and the Office maintains the restriction is still deemed proper. The is therefore made FINAL.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5-10 and 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shain et al. (USP 6,027,349), Moerman et al. (USP 6,706,159) or Stiene et al. (2004/0096959) in view of Eason et al (USP 5,186,897) alone or further in view of Tenerz et al. (USP 4,941,473).

See the appropriate paragraph of the 3/4/08 Office action.

Shain et al. (USP 6,027,349), Douglas et al. (USP 5,951,492), Moerman et al. (USP 6,706,159) and Stiene et al. (2004/0096959) all teach optical/colorimetric

reactions that include a light source to facilitate analysis. These references are silent to the use of the claimed "coherent light" or "non-coherent light."

The court decided In re Boesch (205 USPQ 215) that optimization of a result effective variable is ordinarily within the skill of the art. A result effective variable is one that has well known and predictable results. The selection of the type of light best suited to resolve the particular analyte/reagent combination is a result effective variable. The selection of either coherent or non-coherent light is a result effective variable having the well known and expected results of providing the optimal conditions to best resolve the particular analyte/reagent combination.

It would have been within the skill of the art to modify Shain et al. (USP 6,027,349), Douglas et al. (USP 5,951,492), Moerman et al. (USP 6,706,159) or Stiene et al. (2004/0096959) and use either coherent or non-coherent light as optimization of a result effective variable and to gain the above advantages.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shain et al. (USP 6,027,349), Moerman et al. (USP 6,706,159) or Stiene et al. (2004/0096959) in view of Eason et al (USP 5,186,897) alone or further in view of Tenerz et al. (USP 4,941,473) as applied to claims 1, 5-10 and 12-19 above, and further in view of Stanton et al (US 2004/0219523).

Shain et al. (USP 6,027,349), Douglas et al. (USP 5,951,492), Moerman et al. (USP 6,706,159) or Stiene et al. (2004/0096959) in view of Eason et al (USP 5,186,897) alone or further in view of Tenerz et al. (USP 4,941,473) are silent to the use of a "surface Plasmon resonance sensor."

Stanton et al. teach in paragraph [0351] it is known to incorporate biosensors into fiber optic waveguides. Additionally, paragraphs[0138] teaches real time data is generated by SPR sensor systems as shown in figures 67C and 67D. Paragraph[0767] teach the SPR provides very sensitive analysis of binding/unbinding of analytes.

It would have been within the skill of the art to use a known technique to improve a similar device in the same way. Stanton et al. teaches SPR is known and used in combination with a waveguide for analysis of analytes in biological fluids. Stanton et al. teach the SPR is advantageous because it provides sensitive, real time analysis of the analytes.

It would have been within the skill of the art to further modify Shain et al. (USP 6,027,349), Douglas et al. (USP 5,951,492), Moerman et al. (USP 6,706,159) or Stiene et al. (2004/0096959) in view of Eason et al (USP 5,186,897) alone or further in view of Tenerz et al. (USP 4,941,473) as applied to claims 1 and 5-19 above, and further in view of Stanton et al (US 2004/0219523) and use a SPR sensor to gain the above advantages.

### ***Response to Arguments***

Applicant's arguments filed 6/25/09 have been fully considered but they are not persuasive.

Applicant's remarks were convincing and the Office has replaced the 2/11/09 final action with a new non-final office action.

Applicant states electronics suitable for Shain would be the "TATTLETALE" controller/data logger. Applicant states the "TATTLETALE" has nothing to do with the claimed features of "process a signal ...". It appears Applicant is arguing Shain does not teach a means for processing the signal. However, Shain clearly teaches processing of a signal to obtain the results from the analysis. The Office maintains the pending apparatus claim language is sufficiently broad to have been properly read on the taught processors. The Office maintains the pending apparatus claims only require an element that is capable of some type of "processor" function is taught which is fully met by Shain.

The Office has vacated the rejections over Douglas et al. (USP 5,951,492) in favor of the other cited prior art references which are deemed as stronger rejections.

Applicant traverses Moerman et al. and Stiene et al. stating both of these references teach a processor, but the taught processor cannot be read on the claimed "... process of a signal...". Again the Office take the position that each of these references uses the processor to resolve the change in light based upon the reaction of the analyte and the reagents to provide meaningful values from the reaction. The Office maintains the pending apparatus claim language is sufficiently broad to have been properly read on the taught processors. The Office maintains the pending apparatus claims only require an element that is capable of some type of "processor" function is taught which is fully met by Moerman et al. and Stiene et al. It is not clear why Applicant is stating these references fail to teach signal processing.

Applicant state Stanton et al. does not teach waveguides in combination with SPR. The Office has stated above Stanton et al. teach in paragraph [0351] it is known to incorporate biosensors into fiber optic waveguides and in paragraph[0138] real time data is generated by SPR sensor systems as shown in figures 67C and 67D. The Office maintains these teachings are sufficient to show that both waveguides and SPR are known in the art.

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LYLE A. ALEXANDER whose telephone number is (571)272-1254. The examiner can normally be reached on Monday though Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lyle A Alexander/  
Primary Examiner, Art Unit 1797